

FIG. 1

The nucleotide coding sequence (SEQ ID NO:1) and amino acid sequence (SEQ ID NO:2) of bovine lysozyme

atg aag gct ctc gtt att ctg ggg ttt ctc ttc ctt tct gtc gct
 gtc caa ggc aag gtc ttt gag aga tgt gag ctt gcc aga act ctg
 aag aaa ctt gga ctg gac ggc tat aag gga gtc agc ctg gca aac
 tgg ttg tgt ttg acc aaa tgg gaa agc agt tat aac aca aaa gct
 aca aac tac aat cct agc agt gaa agc act gat tat ggg ata ttt
 cag atc aac agc aaa tgg tgg tgt aat gat ggc aaa acc cct aat
 gca gtt gac ggc tgt cat gta tcc tgc agc gaa tta atg gaa aat
 gac atc gct aaa gct gta gcg tgt gca aag cat att gtc agt gag
 caa ggc att aca gcc tgg gtg gca tgg aaa agt cat tgt cga gac
 cat gac gtc agc agt tac gtt gag ggt tgc acc ctg taa
 H D V S S Y V E G C T L *

00070103 000000

FIG. 2 (sheet 1 of 4)

Nucleotide sequence of the plasmid p1044-Bolys

(extends from nucleotides 5767 – 6211 of the viral vector; the sequence encoding bovine lysozyme, including the stop codon, is inserted as a PacI-XhoI fragment and is shown in lower case letters, underscored)

GTATTTTAC AGCAATTAC AACACACACA AACACAGAC AACATTACAA TTACTATTTA CAATTAGAT GGATACACA CAGACAGCTA
 CCACATCAGC TTGTCTGAC ACTGTCCGAG GAACAACACT CTTCGTCAT AGCGTCGTCT TTACGACACA GCGGTGAAG
 AGTTTAAAGC TTGTGACCG AGCCCAAGG TGAACTTTC AAAAGTAATA AGCGAGGAG AGAGCGTTAT TGTACCCGG GCGTATCCAG
 AATTCCAAT TACTTTTAT AACAGCAAA ATGCGTGCA TTGCGTTGCA GGTGATTCG GATCTTNGA ACTGGATAT TGTATGTC
 AATTCCTGA CGATCATTTG ACTTATGACA TAGCGGGAA TTITGCAICG CATCTGTICA AGGACAGC ATATGTACAC TGCTGCTGCG
 CCACTCTGA CGTCTGAGC ATCAGTGCC AGAAGGCCA GAAAGACGT ATTGAATAT ACCTTTCTAG TGTAGAGGA GGGGGAAA
 CAGTCCCA CTTCBAAG GAGCATTTG ACAGATGCG AGAAATTCCT GAAGACGCTG TGTGCACA TACTTTCCAG ACATGGGAA
 ATCAGCGAT GCGATACA GCGAGATGT ATGCAATTGC SCTACAGC ATATATGACA TACAGCGCA TGAGTTCCGG GCGGACTCT
 ATCGAARAA TGCTCATAG TGTATGCGG TGTATGCG CTTCACCT TTTCGAGAAC CTGCTTCCTG AAGTATCTG GGTCAATTG GCGGAATCA
 ACGGTGTTT TTGCGCGAT GGAGCAAGT TACTTCCGG CCTCTAATAG AGAGTTTAC ATGAAGCAT TTITAGTAC CAGAGTTAT ACCTGTGTTT
 TTAAGTATCT GTCAAACT TACTTCCGG TGTACAAAGG TGTCAGACG GAGAGATC AATAGCTAG ATAGTACCA GTTTTACT GCATAGGAG
 GAAAGTTTC TAAATAGAT ACTTTCTTT TGTACAAAGG TGTCAGACG GAGAGATC AATAGCTAG ATAGTACCA GTTTTACT GCATAGGAG
 ACGCATGCA TTACAAAG ACTTCTCAA TTGCAACAG CGAGAGATC CTCTTCAG ATTCATCAG AGTCATATC TGGTTTCCA
 AAATGTCAG TATGCTATC GTACCATAT TCGCATTC TTGAGACT AGTAAAGGA CGGCAAGA AGTCTATG AGTCATATC TGGTTTCCA
 TCGTGTAC ATGCTTAC CACATTGAA CATACAGG GTTCGAATG GGATGGAG AATATCTTGA ACTATCTTGA ATGTTTGT CTTCGTGAA TCGATTCGAT
 CGAGGTAT CATTAACGT GTGACAGCA GTTCGAATG GGATGGAG AATATCTTGA ACTATCTTGA ATGTTTGT CTTCGTGAA TCGATTCGAT
 ATCATGCT TCGGTCTA AGGATGACT TACTATAG CAAGTTAG TACAGTCTG TACAGGCTT TACATCTT TACATCTT GTCCATGAG TTCTACTGC
 TTGCTGCG GTTTGGAC GAATTTCCCT CCGTGAAGA GAGCTCTTG TACAGGCTT TACAGGCTT TACATCTT TACATCTT GTCCATGAG TTCTACTGC
 TCAAGTGGC TACTATAT GTACCTTCC ACACAGAT AGTACTGAG TACAGGCTT TACAGGCTT TACAGGCTT TACATCTT TACATCTT GTCCATGAG TTCTACTGC
 AGAGATGA AGAACGAA GTGATGACA ATGCATTC AGAATATCG TACAGGCTT TACAGGCTT TACAGGCTT TACATCTT TACATCTT GTCCATGAG TTCTACTGC
 CCCAGATGT CCAATCTTG GAAGTGAAC CAGTACGCG AGCAGAGGT ATAGTGGCG TATGACAA AGCTGTGACA ATTCGATGT GATGTTTTT
 CATTGAGC ACTACTGAG GGAATGTTG TGGCAGAGG AGAGITACA GAGAGGCTT CAGAGGCTT CAGAGGCTT CAGAGGCTT CAGAGGCTT
 AAGTGAAGA ACCGTCCAG AGGGTTGCA TGGCAGAGG AGAGITACA GAGAGGCTT CAGAGGCTT CAGAGGCTT CAGAGGCTT CAGAGGCTT
 CTAGAGAGA GAGATGAG TTTTAGAGC AGTTTCAAT TGGGTGAG GATTCGTTAA TTGCTGAGA TCATCCGAA TCGTCTTAT
 CCGGTCCGAT TAAAGTTCAG AATTGAAGA ACTTATGCA TACCTGGTA TACCTGAT TCGTGGGT GTCGATTC GTCAAGTCC
 TCAAGATAC AGTGTCTAT GACCTTATA CCGTCAAA GTTTGAGTC CATCTAGGA GTGTTAATC AACCAAGG

FIG. 2 (sheet 2 of 4)

CCAAGATCA TCGATGGGT GTTGAGAA CCCAGCGAG GAGTATCAT GTGGCGCTT TGGAAATATG TGACGAGGT GTGTGACAT
 GCGATGATT GAGAGAGTA CGTTAGCT TGATGTCTGT TGTATTCC GAGATGGGA AACTCAGAAC TGCTCGCAA TCCTGCTGAA
 AGGAGAAC CGATCTCACT AGCGAAGT TTGTTCTGT CCGGCTGTG GAARACCAA AGAAATCTT TCACGGTTA
 ATTATGATCA AGATCTAAT TTAGTACTCG GGAAGCAAGC CCGGAAATG ATCAGAGAC GTTGGAAATC CTGAGGATC AGTGTGGCA
 CCAAGACAA CGTTAAACG GTTATGCTT TCATATGAA TTTTGGAAA ACACAGCT GTGAGTCAA GAGTATTTC ATTGATAG
 GGTGTGTT GATCTAGT TGTGTTAAT TTCTGTGCG GATGCTATT TGGCAATG CBAATGTTA CGAGACAA CACGATTC
 CAATACAT TAGCTTTCA GAAATCCGT ACCCGCCA TTITGCCAA TTGGAAITG ACGAGTGA GACAGGCA ACTCTCTC
 GTTGCAGC CGATCTACA CATTAICTA ACAGAGATA TGAGGCTTT TGAGAGCA CTCTCGGT TAAMGTTT GTTCGAGG
 AGATGTTGG CCGAGCGCC GTATCATC CGATCTCAA ACCCTTGCAT GGCAGATCC TGACTTTAC CCAATCGAT AAAGAGCTC
 TGCTTCAG AGGTATTCA TGTTTACA CTGTGCATGA ATGCGAGGC GAGACATCT CTGATTTTC ACTAGTTAG TTACCGCTA
 CCGGTTCT CATCATGCA GGAGACAGC CACATGTTT GTTGCATTG TCAGGACAA CTGTCTCGT CAAGTACTAC ACTGTGTTA
 TGGATCTTT AGTTAGTATC ATTAGATC TAGAGAACT TACTGTGAC TTGTTAGATA TGATAAGT CGATCGAGG ACATATGAC
 AATTACAGT TGACTCGGTG TTCAAAGGT CCAATCTTT TGTTCGAGC CCAAGAGT ACATAGCT TGATATTC TGATACG TTTTACTATG
 ATAAGTCT CCCAGCAAC AGCACATCA TGAATATTT TGAATGTT ACCATGAGT TGACTGACAT TTCATGAT GTCACTATG
 GCATATTGGA TGTGCTAAG TCTGTGCTG CGCTAAGG TCAAATCAA CCACTAATC CTATGTAGC AAGCGGCA GAAATGCCAC
 GCGAGCTGG ACTATTGGA AATTAGTGG CGATGATTA AAGAAACTT AACGACCG AGTGTCTCG CATCTTAT ATTGAATA
 CTGCATCTT GTGTAGAT AGCTTTTGG ATAGTATTT GCTTAAGAA AAGAAHAAC CAAATMAAA TGTTCTTGT TTGCTAGAG
 ACTCTCTCA TAGATGTTA GAAAGACG AATAGAGTT GAACTTCA CTCCAGAGT TTGAATTTG GGATTTGCC CAGTTGATC
 AGTAGACA CATGATAA GCRACCCA ACARAGTT AATAGCCAG ATCCAGAGT ATCCACCGG TTGCAAGC AGTGTAC
 ATTARANA GATCATGCA ATATTCGGC CGTGTTTAG TGAGTTACC GCGCAATTC GACAGATTG TCCTGAGC AGTTGTAC
 TTTTCAAG AAGACACA CCGAGATG AGATTTCT CCGAGATCTC GACAGATTG TCCTGAGC AGTGTAC AGATTTCT
 CAAATACGA CAATCTCAG AATGAATCC ACTGTGCAGT AGATACGAG ATCTGGCNA GATTGGTT TCAGAGCTC TTGCGAAG
 TTGGNAACA AGGCTAGA AAGACCAC TCAAGGATTA TACCGAGGT ATAAACCT GCATCTGTTA TCAAGAAAG ACGGGAGC
 TCACAGCTT CATTCGATC ACTGTGATC TTGCTGCTG TTGCGCTCG ATGCTTCCGA TGGAGAAAT AITCAAGA GCTTTTGG
 GTACAGTAT TCTGCTAC TACTTTGG GAGATATGT TATCATAC CACATCTAT CGAATCTAT GTGATTTT GAACTTGA
 TCTTMAAA ACAGTATGA TACTTTGG GAGATATGT TATCATAC CACATCTAT CGAATCTAT GTGATTTT GAACTTGA
 ATTGCGGT TPAACAGC CATCAAGG ATTGGACA CTGTGAGAG TTGAGAGGT CTCITGTGA TGTTCTGT TTGCTAGC
 AGTATTGCT TATNAGAT TACTTTGG GAGATATGT TATCATAC CACATCTAT CGAATCTAT GTGATTTT GAACTTGA
 CTGCAAAATGAGAGAT CTTCAGCTG AHTTATCC CTGTAAGAG TGTATGTT TCCAAAGTG AATAATCA GTTATGAC
 AANGATCAT GACCTGCTT AAAGAGTTA AGCTTATGA TAGTGATAT CTGTGTTAG CCGTGTGT CGTACGGC
 GAGTGGACT TGCCTGAAA TTGCAGAGA GGTGTAGC TGTTCTGCT GCAAAAGG ATGGAAGAG CCGACGAGC CATTCGGA

FIG. 2 (sheet 3 of 4)

TCTTCATACCA CACGACGTGC AAAGAARAAGA TTTCATGTCCA AGGTCGTTC CAAATTATGCT ATAAACACCC AGGACCGCAT GAABAACGTC
 TGGCAACGTTT TAGTTANAT TGAAGATGTG AAGATGTGAC CGGGTTTCG TCGGCTTCT CTGAGTTCTG TGTGCGTGTG TATGTGTTAT
 AGAATAAATA THAAATTAAG TAAATGATGAC ACCTGAGACA CGAGGCGCAC TCGGAACCTA CACAGACAGT GTTGTATGAG
 TTCTATCGAG ATGTCCTTAT TGTGATCAGG CTTTGCACAGT TTCGATCTCG AACCGGAABA AAGATGATG TCGCGAAGG GAAATAATAGT
 AGTATGCTAG GGTCAAGTCC GAACAAGAAC TATAGAATGT TTAAGGATTT TGGGCGAATG AGTTTAAAA AGAATAATTT AATCGATGAT
 GATTCGGAAG CTACTGTCCG CGAATCGCAT TCGTTTAAATAGTATCTAC AGTATCACA GTTCGATCTCA GTTCGTGTTCT TTGTCAATAA
 TTAAAA
 atg aag gct ctc gtt att ctg ggg ttt ctc ttc gtc gtc gtc cca ggc aag gtc ttt gag aga tgt gag
 ctt ggc aga act ctg aag aaa ctt gga ctg gac ggc tat aag gga gct aac ctg gca aac tga tgt tgt ttt aac
 aaa tgg gaa agc agt tat aac aca aaa gct aca aac tac aat cct agc agt gaa agc act gat tat ggt ata ttt
 cag atc aac agc aaa tgg tgg tgt aat gat ggc aaa acc cct aat gca gtt gac ggc tgt cat gta tcc tga agc
 gaa tta atg gaa aat gac atc gct aaa gct gta gcg tgt gca aag cat att gtc agt ggg caa ggc att aca ggc
 tgg gtg gca tgg aaa agt cat tgt cga gac cat gac gtc agc agt tac gtt gag agt tgc acc ctg taa
 CTGCGGGT AGTCAGATG CATATAAAT AACGATTTG GTCCGTAATC ACAGTGGTG CGTAGATAT CCGATAGTGT TTTCCTCC
 ACTTAATCG AAGGTTGTG TCTTGGATG CGGGGTCAA ACGTATGG TTCAATATCA TCGCAGGCA CGTAATAAG CAGGCGTTC
 GGGTCGAGT CGGCTGTGA ACTTCGAAG GTTCGGAAA ACHAAAGA GAGTGTAGT TAATAGTGT TAATAAGA AATAATAA
 TAGTGGTAAG AAAGTTTGA AGTTGAGA AATGAGAT AGTTAAGT ATACAGATC TATCGCTCA TCGATAGCT TTATACAT
 ATGCCTTATA CAGTCACTC TCGAGCCAA TTTGTTTACT TAAGTTCGC TTATGCAGAT CTTGTGCAGC TGATCACT GTGTACAAT
 CGATTGGTA ACCAGTTTC AAGCACAAC GCTAGACAA CAGTCCAAC GCAATTTCGG GATCGCTGA AACCTGTCC TACTATGACA
 STGAGATTIC CTGATCGGA TTCTATGTG TATAGATTA ATTCCAGCT TGATCGTGTG ATCAGCGCT TATTAATAG CTTCATACT
 AGAATAGNA TAATGAGT TGATATCAA CCGCACCCA ATACTACTA ATCTACTGA AGCTGTAC GCGATCAGA GGTAGACGA TGGACTTA
 GCTATAGGG CTTCATCAA TAATTGCGT CTAATCTTAG TTTCTGBAAC TTTCTGATC TGGCAGTTC AATCAGCA TCGTATGTA
 CTGTCTGSA CCACATCC GGTCTGATG AATCACTCC ATACTACTG TGGCAGTTC AATCAGCA TCGTATGTA TCGTATGTA
 TACCAAAATC AGCAGTGT GTTGTCCAC TTAATATTA CAAATGAT CACTAGAG CACTAGAG TTAATAATCA GGTGTGCTGA
 TGGTATGCGG TAAACAGCG GAAGTCGCG TGAACATTA AATTCAGG TGGCTGATC AACGTTAA CAGTGTGCTGA
 RAATTAAGA TTGTATATC TGAATCCAC AGTTAACCA TGTGATGTTG TATGCTAGT CAAATACAG AGTGTGTT GTTCACACTA
 CCTCCCTTAA CGCGGGTAG CGGCCAGGT ACCCGGAT GTTTTCGGG CTGATGATC TATGCGTAA AACACGAG AGTTCGAT
 AAGCTTGGCG TAATCATGTT CATAGCTGTT TGTCTGTA AATGTATC GCTTCACAT TCCACAAC ATACAGCG GAAGCATNAA
 GTGTAAAGCC TGGGTGCT ATAGATGAG CTAACTACA TTAATGGGT TGGCTTACT GCGCTTTC CACTCGGAA ACTGTGCTG
 CCAGCTGCAT TAATGAATG GGCACGCG GCGGAGGC GGTTCGTA TTGGCGCTC TTGCGTTC TCGCTCAT ACTGCTGCG

FIGURE 2 (sheet 4 of 4)

CTCGGTCGTT CGGTGCGGCG GAGCGGTATC AGTCACTCA AAGCGGTAA TACGCTATC CACAGATCA GGGGATAAC CAGGAAGAA
 CATGAGAGA AAGGCGACG AAGAGCCAG GAAACGTAAA AAGCCGCGT TGCTGGGCTT TTTCATATG CTCGCCCCC CTGACAGCA
 TCACAAAAT CAGGCTCAA GTACAGAGTG CGGAACCCG CACAGACTAT AAGATACCA GCGCTTCCO CTTGAGACCT CCCTGTCGCG
 CTCCTCGTGT CGACCTGCG CGCTTACCGG ATACCTGTCG GCTTTCTCC CTTGCGAAG CGTGGGCGT TCTAATACCT CCCTGTCGCG
 GIATCTGCT TGGGTAGG TCGTTCGCT CAGCTGGG TGTGFCAG GAGCCCGCT TACGCCGAG CGCTGGCTT TATCCGGTAA
 CTATCGCTT GAGTCAAC CGTAAACA CAGCTATCG CACTGGAG CAGCCTCG TACAGGAT AGCAGAGCA GGTATATG
 CGGTGCTACA GAGTCTTGA ATGTGGCC TACTACCG TACATGAA GACAGTAT TGTATCTG GTCTCTGTA AGCAGTATC
 CTTGGAAA AAGTTCGTA CTTCTGAT CGGCAACHA ACCACCGTG GTACGGTG TGTATCTG GTCTCTGTA AGCAGTATC
 CAGAAAAA GAGTCCAG AGATCTTT GATCTTTCT AGCGGCTTG AGCGGTG GAAAGAAAC TCACTTAAG GATTTTGGT
 CATGAGNTA TCAAAAGGA TCTCACCTA GATCTTTTA AATTAATAA GAGTCTTAA ATCAACTTA AGTATATAT AGTAACTTG
 GTCTGAGT TACAAATGT TAATCACTA GACACTATC TACGGATCT GTCATTTG TCAATCCAA GTTGCTTAC TCGCGTGTG
 GTAGATRACT ACGATACGG AGGCTTAAC ATCTGGCCC AGTCTGCAA GTATACGG AGACCCAGC TCAAGGCTC CAGATTATC
 AGCAATAAAC CAGCCAGCG GAAGGCGGA GCGCAGAGT GTTCTGCAA CTTATCCG CTCATCCAG TCTATTAACT GTTGGCGGGA
 AGCTAGATA AGTATTCTG CAGTTAATG TTGCGCAC GTCCTGCGA GTTCTGCGA TGTCTGCGA TGTCTGCGA TGTCTGCGA
 GCTTCATTC AGTCCGGT CCGACAGT TTGCGCAC GTTCTGCGA TGTCTGCGA TGTCTGCGA TGTCTGCGA TGTCTGCGA
 GATCGTGTG AGAGTAACT TGGCGCAGT GTTCTGCGA TGTCTGCGA TGTCTGCGA TGTCTGCGA TGTCTGCGA TGTCTGCGA
 ATGCTTTCT GTACTGGT AGTACTAC CAGTACTC ATGCTATAG GTGACTGAG CAGTACTG CAGTACTG CAGTACTG CAGTACTG
 GGTAAATTC GGGCCATA GAGAACTT AAAAGTCT AAAAGTCT AAAAGTCT AAAAGTCT AAAAGTCT AAAAGTCT AAAAGTCT
 GTTGAATCC AGTTCGAT ACCAGCTG TCACCCAA CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG
 AGGAAGCAA AATCCCAA AAAAGGAT AATCTTCA GAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG
 TTATCAGGT TATGCTCA TGAAGGATA CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG
 AATGCACT GAGCTTAA AACCAAT TATATGCA TGTATTGA AATATGCA AATATGCA AATATGCA AATATGCA AATATGCA
 CGGTATGAC GTGAAAC TCTGACAT TGTGACAT TGTGACAT TGTGACAT TGTGACAT TGTGACAT TGTGACAT TGTGACAT
 CGGACAGAT GGTGAGGAG TCGGAGGAG TCGGAGGAG TCGGAGGAG TCGGAGGAG TCGGAGGAG TCGGAGGAG TCGGAGGAG
 GTTGAaata TCGAGGAG TCGAGGAG TCGAGGAG TCGAGGAG TCGAGGAG TCGAGGAG TCGAGGAG TCGAGGAG TCGAGGAG
 GTGCGGCT CTTGCTAT AGCCAGTG CCGAAGGG GATGCTCG CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG
 CAGCTTTGA AAAAGCGCG CAGTAAATC AAGCTAATA CAGTACTG CAGTACTG CAGTACTG CAGTACTG CAGTACTG



Fig. 3.

10-20% Tris-Glycine SDS PAGE gel

1. Marker
2. (+) BoLys - 1 μ g
3. (+) BoLys - 2 μ g
4. (+) BoLys - 5 μ g
5. Nb-1 GJ - 2 μ l
6. Nb-2 GJ - 2 μ l
7. Nb-3 GJ - 2 μ l

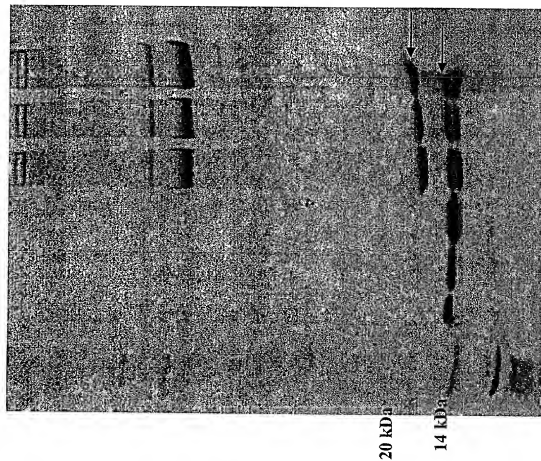


Fig. 4

14% Tris-Glycine
SDS-PAGE gel

1. Marker
2. (+) Hen EW lys 5 μ g
3. (+) BoLys - 1 μ g
4. (+) Boys - 2 μ g
5. (+) BoLys - 3.5 μ g
6. (+) BoLys - 5 μ g
7. (+) BoLys - 7 μ g
8. 1051500 IF crude - 1 μ l
9. 1051500 IF crude - 5 μ l
10. 1051100 IF crude - 1 μ l
11. 1051100 IF crude - 5 μ l
12. Marker 12

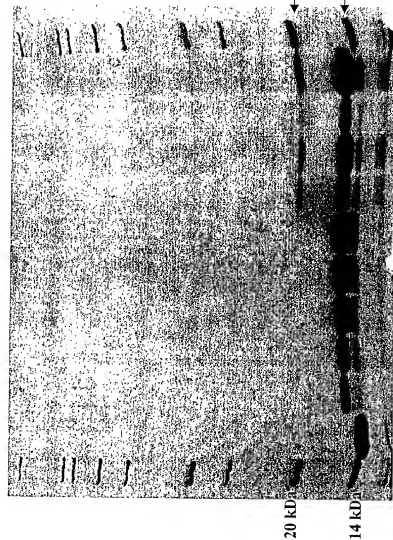


Fig. 5

202210-6618/660

Method: HCD-MS
Mode: Linear
Scans Averaged: 62
Pressure: 1.07e-07
Low Mass Gate: 1000.0
Collision Energy: 40.00 eV
Collision Voltage: 0.10 %
Display: 100 ON
Negative: OFF
Sample: 44
Collected: 4/3/2006 5:13 PM

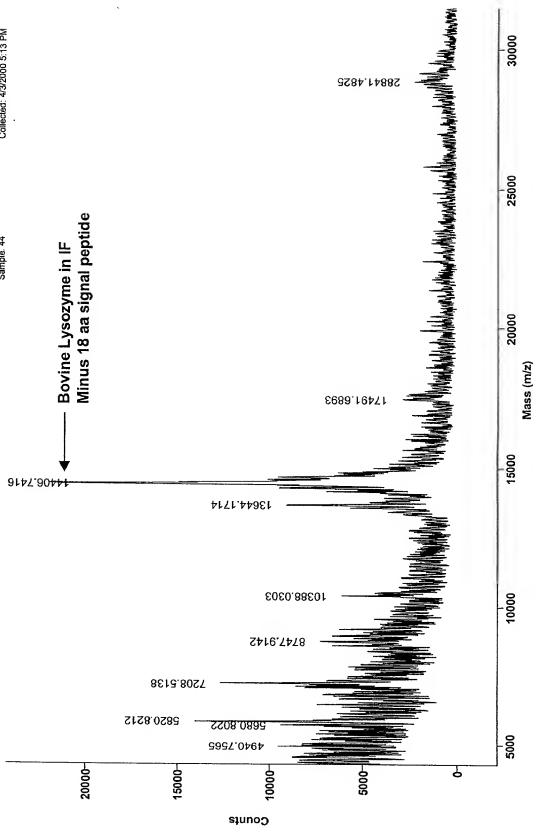


Fig. 6

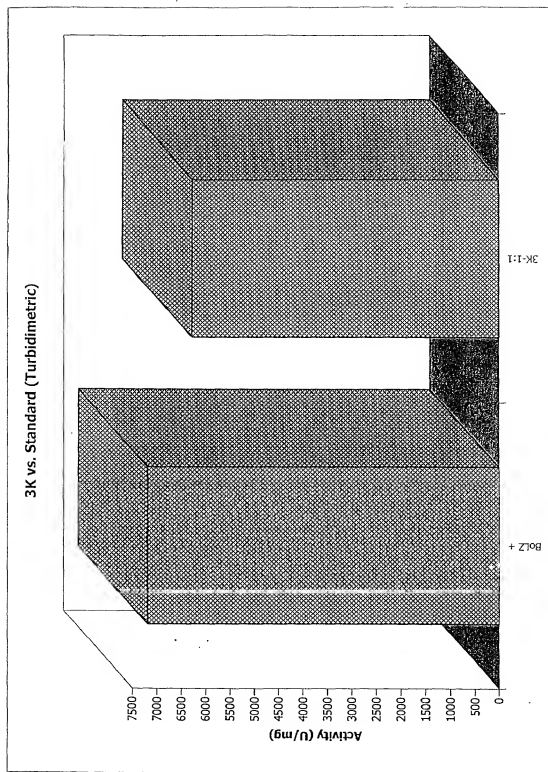


Fig. 7

20210-6518/69

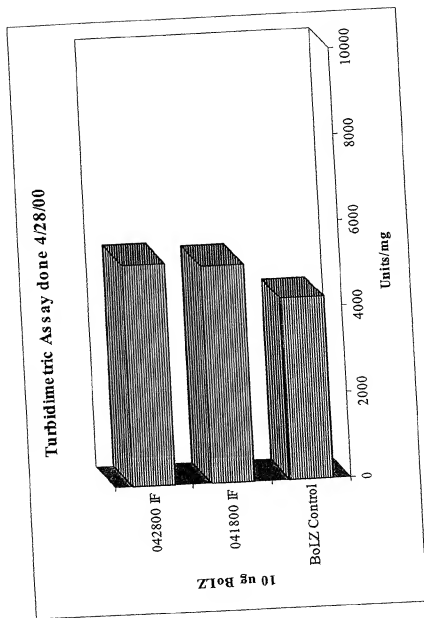


Fig. 8

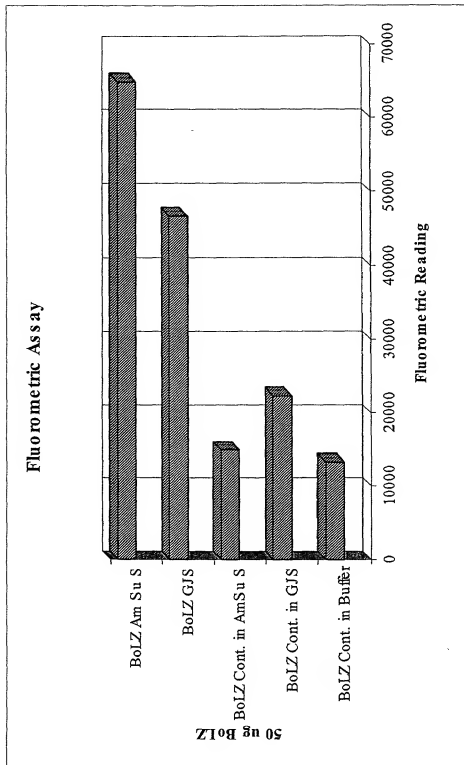


Fig. 9

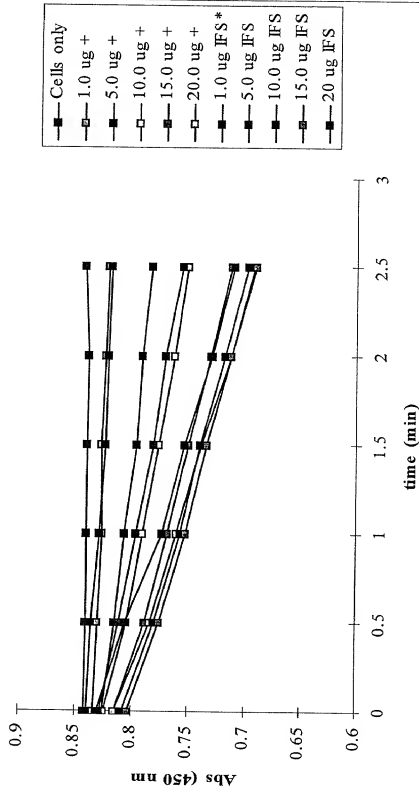


Fig. 10